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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/798,108

03/10/2004

Richard C. Ferri

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11/24/2009

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EXAMINER

TRUONG, CAMQUY

ART UNIT

PAPER NUMBER

2195

MAIL DATE

DELIVERY MODE

11/24/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/798,108	Applicant(s) FERRI ET AL.	
	Examiner CAMQUY TRUONG	Art Unit 2195	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 July 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,5-10,14-18,20 and 24-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,5-10,14-18,20 and 24-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>6/11/09, 7/30/09</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1, 5-10, 14-18, 20 and 24-28 are presented for examination. Claims 2-4 and 11-13, 19, 21-23 are canceled.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. **Claims 1, 5-10, 14-18, 20 and 24-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ota et al. (U.S. 7,162,671) in view of Michaelis (U.S. 7,519,800).**

3. As to claim 1, Ota teaches substantially as claimed including: a method of facilitating allocation of resources in a heterogeneous computing environment, said method comprising:

one or more attributes relating to a node coupled to the resource manager, wherein said node is of the heterogeneous computing environment and is of a native architecture, and wherein the one or more attributes specify one or more non-native architectures supported by the node (col. 1, lines 7-15), said one or more non-native architectures being different than said native architecture (col. 8, lines 54-58);

the specific request specifies the architecture for the specific request that is different from the native architecture of the node (col. 1, lines 23-27); and

allocating one or more resources of the node to the specific request (col. 8, lines 49-62);

4. Ota does not explicitly teach obtaining, by a resource manager executing on a processor of the heterogeneous computing environment, one or more attributes; determining by the resource manager whether the node supports an architecture capable of executing a specific request; allocating one or more resources of the node to the specific request, in response to the determining indicating the node supports the architecture of the request. However, Michaelis teaches obtaining, by a resource manager executing on a processor of the heterogeneous computing environment, one or more attributes (col. 4, lines 36-43); determining by the resource manager whether the node supports an architecture capable of executing a specific request (col. 4, lines 44-50) ; allocating one or more resources of the node to the specific request, in response to the determining indicating the node supports the architecture of the request (col. 4, lines 44-50).

5. It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Ota to incorporate the teaching of obtaining, by a resource manager executing on a processor of the heterogeneous computing environment, one or more attributes; determining by the resource manager

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whether the node supports an architecture capable of executing a specific request; allocating one or more resources of the node to the specific request, in response to the determining indicating the node supports the architecture of the request as taught by Michaelis because this allow to allocate dynamically elements in heterogeneous computer systems.

6. As to claim 5, Ota teaches wherein the specific request comprises a program to be executed (execution of application software program on the execution unit 2000, col. 8, lines 49-62).

7. As to claim 6, Michaelis teaches wherein the obtaining comprises providing by the node the one or more attributes to the resource manager (col. 4, lines 36-43).

8. As to claim 7, Michaelis teaches wherein the providing of the one or more attributes by the node to the resource manager is via one or more other resource managers coupled to the node (col. 4, lines 36-38).

9. As to claims 8-9, Michaelis teaches the resource manager is a grid resource manager, and the one or more other resource managers comprise one or more cluster resource managers, col. 1, lines 15-20).

10. As to claim 10, it is rejected for the same reason as claim 1.

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11. As to claim 14, it is rejected for the same reason as claim 5.
12. As to claim 15, it is rejected for the same reason as claim 6.
13. As to claim 16, it is rejected for the same reason as claim 7.
14. As to claims 17-18, they are rejected for the same reason as claims 8-9.
15. As to claim 20, it is rejected for the same reason as claim 1.
16. As to claim 24, it is rejected for the same reason as claim 5.
17. As to claim 25, it is rejected for the same reason as claim 6.
18. As to claim 26, it is rejected for the same reason as claim 7.
19. As to claims 27-28, they are rejected for the same reason as claims 8-9.

Response to the argument

20. Applicant's arguments filed 7/30/09 for claims 1, 5-10, 14-18, 20 and 24-28 have been considered but are moot in view of the new ground(s) rejection.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CAMQUY TRUONG whose telephone number is (571)272-3773. The examiner can normally be reached on 9:00am - 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng Ai An can be reached on (571)272-3756. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Meng-Ai An/
Supervisory Patent Examiner, Art Unit 2195

Camquy Truong

November 8, 2009